



4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24777; Directorate Identifier 2006-NE-19-AD]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce Deutschland Ltd & Co KG Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to supersede airworthiness directive (AD) 2007-03-02 for all Rolls-Royce Deutschland (RRD) Tay 620-15, Tay 650-15, and Tay 651-54 turbofan engines. AD 2007-03-02 requires an ultrasonic inspection (UI) of low-pressure (LP) compressor fan blades for cracks on certain serial number (S/N) Tay 650-15 engines. AD 2007-03-02 also requires, for all Tay 611-8, 620-15, Tay 650-15, and Tay 651-54 engines, initial and repetitive UIs of LP compressor fan blades. AD 2007-03-02 also requires, for Tay 650-15 and Tay 651-54 engines, UIs of LP compressor fan blades whenever the blade set is removed from one engine and installed on a different engine. Since we issued AD 2007-03-02, we received a report of an additional engine failure due to multiple fan blade separation. This proposed AD would require additional inspections for the affected engines and removal of the Tay 611-8 engine from the applicability of this AD. We are proposing this AD to prevent failure of the LP compressor fan blade, engine failure, and damage to the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, D-15827 Blankenfelde - Mahlow, Germany; phone: 49 0 33 7086 1200; fax: 49 0 33 7086 1212. You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the mandatory continuing airworthiness information, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England

Executive Park, Burlington, MA 01803; phone: 781 238 7779; fax: 781 238 7199; email: frederick.zink@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2006-24777; Directorate Identifier 2006-NE-19-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

On January 22, 2007, we issued AD 2007-03-02, Amendment 39-14913 (72 FR 3936, January 29, 2007) (“AD 2007-03-02”) for certain RRD Tay 611-8 and Tay 620-15 turbofan engines with LP compressor module, part number (P/N) M01100AA or P/N M01100AB, installed, and Tay 650-15 and Tay 651-54 turbofan engines with LP compressor module, P/N M01300AA or P/N M01300AB, installed. AD 2007-03-02 requires UI of LP compressor fan blades for cracks on certain S/N Tay 650-15 engines. AD 2007-03-02 also requires, for all Tay 611-8, 620-15, 620-15/20, Tay 650-15, Tay 650-15/20, and Tay 651-54 engines, initial and repetitive UIs of LP compressor fan blades. AD 2007-03-02 also requires, for Tay 650-15 and Tay 651-54 engines, UIs of LP compressor fan blades whenever the blade set is removed from one engine and installed

on a different engine. AD 2007-03-02 resulted from a report that a set of LP compressor fan blades failed before reaching the LP compressor fan blade full published life limit. We issued AD 2007-03-02 to prevent LP compressor fan blades from failing due to blade root cracks, leading to uncontained engine failure and damage to the airplane.

Actions Since AD 2007-03-02 Was Issued

Since we issued AD 2007-03-02, we received reports of additional engine failures. Also since we issued AD 2007-03-02, the European Aviation Safety Agency issued AD 2013-151R2, dated September 2, 2013, which requires UI, and replacement if found cracked, of affected LP compressor fan blades. Also since we issued AD 2007-03-02, RRD issued ANMSB TAY-72-A1442, Revision 5, dated May 31, 2013 which removed the Tay 611-8 engine from the list of applicable engines.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD requires a UI of LP compressor fan blades for cracks for all 620-15, Tay 650-15, and Tay 651-54 engines. This proposed AD would also require accomplishing the actions specified in the service information described previously.

Costs of Compliance

We estimate that this proposed AD would affect about 52 engines installed on airplanes of U.S. registry. We also estimate that it would take about 4 hours per engine to remove and inspect an LP compressor blade set. The average labor rate is \$85 per hour. Prorated parts life will cost about \$11,750 per engine. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$628,680.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing airworthiness directive (AD) 2007-03-02, Amendment 39-14913 (72 FR 3936, January 29, 2007), and adding the following new AD:

Rolls-Royce Deutschland Ltd & Co KG: Docket No. FAA-2006-24777; Directorate Identifier 2006-NE-19-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD supersedes AD 2007-03-02, Amendment 39-14913 (72 FR 3936, January 29, 2007).

(c) Applicability

This AD applies to Rolls-Royce Deutschland Ltd & Co KG (RRD) Tay 620-15 turbofan engines with low-pressure (LP) compressor module, part number (P/N) M01100AA or P/N M01100AB, installed, and Tay 650-15 and Tay 651-54 turbofan engines with LP compressor module, P/N M01300AA or P/N M01300AB, installed.

(d) Unsafe Condition

This AD was prompted by a report of an additional engine failure. We are issuing this AD to prevent failure of the LP compressor fan blade, engine failure, and damage to the airplane.

(e) Compliance

Comply with this AD within the compliance times specified, unless already done.

(1) Tay 650-15 and Tay 651-54 engine LP Compressor Fan Blade Ultrasonic Inspection (UI):

(i) After the effective date of this AD, whenever LP compressor fan blades are removed from an engine, before re-installation on a different engine, inspect the LP compressor fan blades and accomplish a UI of the LP compressor fan blades in accordance with Instruction I of paragraph 3 of RRD Alert Non-Modification Service Bulletin (NMSB) TAY-72-A1442, Revision 6, dated August 26, 2013.

(ii) After the effective date of this AD, during each engine shop visit, before return to service of the engine, inspect the LP compressor fan blades and accomplish a UI of the LP compressor fan blades in accordance with Instruction II of paragraph 3 of RRD Alert NMSB TAY-72-A1442, Revision 6, dated August 26, 2013.

(2) For Tay 620-15 engine LP Compressor Fan Blade UI, after the effective date of this AD, before return to service of an engine after every mid-life, or every calendar life, or every overhaul shop visit, inspect the LP compressor fan blades and accomplish a UI of the LP compressor fan blades in accordance with Instruction II of paragraph 3 of RRD Alert NMSB TAY-72-A1442, Revision 6, dated August 26, 2013.

(3) For Tay 620-15, Tay 650-15, and Tay 651-54 engine LP Compressor Fan Blade and Rotor Disk Replacement, if during any inspection required by paragraph (e)(1) or (e)(2) of this AD, any LP compressor fan blade is found cracked, before next flight or

return to service of the engine, replace the complete set of the LP compressor fan blades and the LP compressor rotor disk.

(f) Credit for Previous Actions

If, before the effective date of this AD, you inspected or replaced any Tay 620-15, Tay 650-15, or Tay 651-54 turbofan engine LP compressor fan blades or rotor disk assembly using RRD Alert NMSB TAY-72-A1442, Revision 5, or earlier, you have satisfied the requirements of paragraphs (e)(1) through (e)(3) of this AD.

(g) Definitions

For the purposes of this AD for Tay 620-15 engines:

(1) A mid-life shop visit is an engine shop visit accomplished before accumulating 12,000 engine flight cycles since new (FCSN) or flight cycles (FC) since last engine mid-life shop visit;

(2) A calendar-life shop visit is an engine shop visit accomplished within 10 years since new or since the last engine calendar-life shop visit;

(3) An overhaul shop visit is an engine shop visit accomplished before accumulating 22,000 engine FCSN or FC since the last engine overhaul shop visit.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(i) Related Information

(1) For more information about this AD, contact Frederick Zink, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238 7779; fax: 781-238 7199; email: frederick.zink@faa.gov.

(2) Refer to MCAI European Aviation Safety Agency, AD 2013-151R2, dated September 2, 2013, for more information. You may examine the AD on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2006-24777-0012>.

(3) Rolls-Royce Deutschland Ltd & Co KG Alert Non-Modification Service Bulletin No. TAY-72-A1442, Revision 6, dated August 26, 2013, pertains to the subject of this AD and can be obtained from RRD, using the contact information in paragraph (i)(4) of this AD.

(4) Rolls-Royce Deutschland Ltd & Co KG, Eschenweg 11, D-15827 Blankenfelde - Mahlow, Germany; phone: 49 0 33 7086 1200; fax: 49 0 33 7086 1212.

(5) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Issued in Burlington, Massachusetts, on November 19, 2013.

Colleen M. D'Alessandro,
Assistant Directorate Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

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